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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/916,919	07/27/2001	Shu Lin	PU 010161	8797

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EXAMINER	
BOCCIO, VINCENT F	

ART UNIT	PAPER NUMBER
2616	

DATE MAILED: 03/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/916,919	Applicant(s) LIN, SHU	
	Examiner Vincent F. Boccio	Art Unit 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-20 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-20 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 6/25/03.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

The Group and/or Art Unit location of your application in the PTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Group Art Unit 2616.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

   A person shall be entitled to a patent unless --

   (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3, 6-7, 12-17 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Tanaka (US 5,764,847).

   Regarding claims 1-2, 6-7, 12, Tanaka in Fig. 2, discloses a system having a corresponding method and meets the limitations associated with the steps comprising:

   - receiving a plurality of multimedia inputs (Fig. 2, 51, 52, 53, 60, 61, 62, 63, seven or 7, inputs, made up of audio and video input signals);
   - sampling the multimedia inputs (54, 55, 56, 66, 67, 68, 69, A/D conversion is a sampling of the input signal, thereby generating an output, which has a sampling rate, thereby generating a representation of the input in the form of digital samples, as is conventional);
   - combining the samples inputs (102);
   - wherein encoding the sampled, such that the number of encoding devices required to encode the sampled is less than the number of the plurality of inputs (two encoders 100 for video & 101 for audio);
   - which are recorded (to 105) and thereafter played back (from 105, tape).

   Regarding claim 3, since encoded must be decoded, since video, some sort of display device, deemed met in view of the recording device.

Regarding claim 13, Tanaka further meets the limitations of wherein the system further comprises:

- a receiver for receiving the audio signals (Fig. 2);
- a audio down-mixer (reads on one or more elements as shown, such as, the sampling met by the A/D, sample and converts the received, further in combination with elements 79 {mixer}, which receives two signals and ouputs one, therefore, down converting received sampled signals from two to one, further the system has two recording modes one a two channel and the other a four channel audio recording modes, cols. 4-5, and lastly, Fig. 2, between 60-63 and the output of memory 96 a, also read on a down converter for audio, by A/D sampling, converting and mixing by various elements including 96 a);
- wherein at leas one encoder for encoding the down-mixed audio signals (101), wherein the number of encoders is less than the number of audio signals (one audio encoder for multiple audio signals).

Regarding claims 14-17, Tanaka further shows

- a multiplexer for multiplexing the audio and video signals (102), wherein the system further meets the limitations of providing;
- a decoder, based on the encoding system, steps and method and;
- a processor for processing the decoded based on the encoding method and steps;
- further requires a de-multiplexer for de-multiplexing, based on when recording audio and video are multiplexed and;
- a display to view the video with some sort of audio device {deemed met by being inherently required features, based on recording video and audio and the steps and system elements etc.....}.

Claim 19 is analyzed and discussed with respect to the claims above.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
>
> This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

4. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka (US 5,764,847) in view of Campbell et al. (US 4,967,271).

Regarding claim 4, Tanaka fails to disclose up-converting at least one of the sampled multimedia inputs.

Campbell teaches up-converting of a video input, by line doubling the input video signal, having advantages of reducing the visibility of the scan line structure of the picture image, col. 1, doubling from an input video having 262.5 lines per field to 525, in accord to col. 3, eliminate the double imaging artifact … which occurs in the prior art, as taught by Campbell.

Therefore, it would have been obvious to one skilled in the art at the time of the invention to modify Tanaka by incorporating the step of performing line doubling, as taught by Campbell, having advantages as stated above, in view of Campbell.

5. Claims 5, 18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka (US 5,764,847) in view of Sato et al. (US 5,566,174).

Regarding claims 5 and 18, Tanaka fails to disclose providing a dummy input to be combined with at least one of the inputs.

Sato teaches, when recording to a tape recording medium, wherein an input having an unknown rate can be varying and/or bursty (Fig. 6), providing a means to input dummy data met by NULL Packet generator 49, thereby to process the video to a known rate fixed & constant in order to record to the DVCR, col. 5 etc…, as taught by Sato.

Therefore, it would have been obvious to one skilled in the art at the time of the invention to modify Tanaka by incorporating a null packet generator to modify the video when and if the data rate varies, to create a fixed rate data stream, in order to record to tape of the DVCR, as taught by Sato.

Claim 20 is analyzed and discussed with respect to the claims above, wherein Tanaka further meets the limitations of wherein a combiner is provided for combining the sampled inputs (met by combining elements after A/D element combiners 78 & 79 and 94 A and 102, also 94 V);

- multi-plexer, for audio and video (102);
- a processor met by decoding based on the encoding elements and steps;
- a display for video and with associated speaker for audio.

6. Claims 8-9, 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka (US 5,764,847).

Regarding claims 8-9, Tanaka does disclose encoding or converting the input video to, ½ the video signal, prior to recording or high efficiency encoding of the video to ½ {col. 3}, but, fails to disclose a D1 video signal and further fails to disclose D1 to SIF.

The examiner takes official notice that D1 and SIF are well known and to convert between, to cut down the amount of data as is well known, wherein D1 to SIF or ½ D1, met by removing or sampling the incoming to remove ½ the lines for recording is well known, therefore, it would have been obvious to those skilled in the art to adhere to D1, process to ½ D1 or SIF for

recording as is well known and obvious to record video with multiple audio signals, even beyond stereo or two channels, as is obvious to those skilled in the art.

Regarding claim 10, Tanaka discloses recording two channels in a two channel audio mode with video, and recording a four channels of audio with video, but, fails to disclose wherein the inputted {60, 61, 62, 63}, combined {79 & 78}, two channels of two audio signals, and recording are at least one stereo signal.

The examiner takes official notice that stereo is well known being a combination of right and left channels, therefore, it would have been obvious to one skilled in the art at the time of the invention to modify Tanaka by providing audio inputs corresponding to Right and Left channels or Stereo audio input channels to be merged to a stereo signal, prior to recording, as is obvious to those skilled in the art.

Regarding claim 11, Tanaka provides for recording either in a two, and four channel audio modes, provides elements to combine multiple audio channels, to a composite signal, but fails to particularly disclose sampling to converting the more than two input audio signals, to a mono audio signal.

The examiner takes official notice that converting from more than two channels to a mono signal for recording is well known, and therefore it would have been obvious to one skilled in the art at the time of the invention to convert more than two audio channels to a mono signal, for recording to cut down the amount of data for the audio signal, with respect to other desired data to record such as the video, thereby allowing use of the saved media areas for other information, such as other or higher quality video, or other or another audio signal in another language, or other desired data, as is deemed obvious to those skilled in the art.

Contact Fax Information

Any response to this action should be mailed to:
Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 872-9306, (for formal communication intended for entry)

Contact Information

Any inquiry concerning this communication or earlier communications should be directed to the examiner of record, Monday-Thursday, 8:00 AM to 5:00 PM Vincent F. Boccio (703) 306-3022.

Primary Examiner, Boccio, Vincent
3/21/05